

ABSTRACT OF THE DISCLOSURE

A substrate having a film to be etched is held on a rotating stage. While rotating the substrate, a chemical solution containing
5 an etchant is supplied onto the substrate from a nozzle. A lamp house is descended with a drive unit so that the distance between the substrate and a glass window of the lamp house becomes 2 to 5 mm, the lamp house accommodating a lamp generating ultraviolet light. The ultraviolet light is radiated onto the film through the chemical solution.
10 Radiation of the ultraviolet light is performed at a higher energy than binding energy of constituent molecules of the film.